CHAPTER E

CITY OF CORONADO

GENERAL PLAN CIRCULATION ELEMENT

Adopted by the City Council
October 17, 1995

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City of Coronado

Circulation Element

Foreword

The Circulation Element is a Mandated Element of the City of Coronado General Plan Policy Document. The following general questions were considered in the formulation of this document:

Which streets are to be major thoroughfares?
How shall traffic be controlled?
What traffic programs are advisable?
How can the adverse impact of traffic be mitigated?
Where should bicycle routes be located?
How should motor vehicle, bicycle and pedestrian traffic be separated?

The City of Coronado adopted its first Circulation Element in 1971. The City Council on July 17, 1984 appointed a nine member ad hoc Transportation Circulation Committee to organize community participation in the development of a new draft General Plan Circulation Element. This City Council action initiated a long review process that included numerous workshops and public hearings before this committee, the Planning Commission and the City Council.

In November of 1988, informal discussions were initiated between the City, Navy, Caltrans and commuter representatives in order to address bridge traffic related issues. The City Council approved formation of the formal Unified Transportation Planning Group (UTPG) on January 17, 1989 to develop a California Transportation Commission funding request for bridge traffic related circulation projects. The UTPG was tasked by the City Council to create a Unified Transportation Plan to include:

1. Refinement of an arterial system;

2. Identification of alternative modes of transportation;

3. Placement of pedestrian and bicycle safety crossings;

Definition of traffic standards;

5. Limits on traffic; and with

6. Mitigations and costs to be determined by March 21, 1989.

The Unified Transportation Plan(UTP) was adopted by the City April 25, 1989. The goal of the UTP was to mitigate the impacts of traffic on the community and commuter, to improve traffic flow and safety, to improve cross-highway safety and accessibility, and to reduce the volume of traffic in and approaching the community of Coronado. The UTP was submitted to the California Transportation Commission for its May 1989 meeting. The CTC has subsequently authorized funding some of the UTP recommended projects from Coronado-San Diego Bay Bridge toll revenues.

City staff in the Fall of 1990 merged the UTP into the old General Plan Circulation Strategy document to create a new draft Circulation Element. During 1991 and 1992, first the Traffic Circulation Committee and then the Planning Commission held a number of workshops and Public Hearings to discuss the draft Element and various alternatives to it. The draft Element was revised and approved by the Planning Commission April 14, 1992, and further revised and approved in concept by the City Council on November 17, and December 1, 1992, and on January 19, 1993. Goals 14 and 15 were added by the City Council on March 1, 1994. The Final Environmental Impact Report for this draft was certified by the City Council July 6, 1995; and the Element itself was approved by the Planning Commission September 26, 1995, and adopted by the City Council on October 17, 1995.

Table of Contents

| | | Page | |
|---|---|------|--|
| Table of List of F List of T Introduct Circulation The Circulation Bus, Bicywater Vest Appendix | ion | | Eiii Eiii E1 E1 E4 E8 E12 E14 |
| | <u>List of Figures</u> | Page | |
| Figure A Figure B Figure C Figure D Figure E Figure F | Circulation Plan (The Village) Circulation Plan (Silver Strand) MTDB Bus Routes | 1 | E9 E10 E11 |
| | <u>List of Tables</u> | Page | |
| Table A Table B | Street Classification Considerations. LOS For Signalized Intersections | | E2 E17 |

Introduction

A city's circulation system permits and facilitates movement on both land and water by pedestrians and drivers of both motorized and non-motorized vehicles. The City's streets, navigation channels, bicycle routes, et cetera, are aspects of the circulation system. interrelationships between the different modes transportation, and among circulation, transportation, parking and land use policies further complicates These interrelationships are circulation analysis. evidenced by the coordination of the policies and programs presented in the City's General Plan Circulation, Transportation, Parking and Land Use Elements.

A circulation hierarchy of street classification system is established based on the desired role of each system element. It is this coordinated and integrated street system (summarized on Table "A") which provides the framework for achieving community goals.

All Coronado city streets are classified as either arterial, collector or local. Arterial streets are further divided into principal arterials and minor arterials. The criteria for determining classification are the importance and purpose of traffic movement and volumes on a particular street. Arterial streets carry traffic primarily to, from and through the city. Principal arterials carry large volumes and, in Coronado, are also state highways. Minor arterials carry much smaller volumes on city streets. Collector streets support the arterial street system connecting local and arterial streets. Collector streets permit locally destined or generated traffic access to or from the arterial street system. Streets that carry the smallest traffic volumes, and that primarily function to provide access to adjoining property are termed "local" streets.

This Circulation Element addresses the above technical concerns in an attempt to achieve the circulation system goals expressed below.

Circulation System Goals

The Circulation System Goals of the City of Coronado City Council are to:

1. Provide a disciplined traffic circulation system to correlate with and assist in achieving the following overall concept for the Coronado General Plan: "To preserve and improve Coronado primarily as a beautiful, pleasant residential community in which to live, work, shop and pursue leisure time activities."

TABLE A
STREET CLASSIFICATION CONSIDERATIONS

| Classification | R/W Width+ (ft) | Pavement Width+ (ft) | # <u>Lanes+</u> | Design ADT | Speed Limit (mph) | Primary <u>Purpose</u> |
|------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------|---|
| Major Arterial | 80* | 64* | 4D | >15,000 | 25 to 55 | State highway system; with limited driveway access |
| Minor Arterial | 80 | 48 | 2U | 7,500 to 15,000 | 25 to 30 | Connects State Highways to collectors; with driveway access |
| Collector Street | 80 | 48 | 2U | 2,500 to 7,500 | 25 to 30 | Collect and distribute local traffic; with driveway access |
| Local Street | 60 | 40 | 2U | <2,500 | 25 to 30 | Intended for direct land and driveway access |

ADT = Average Daily Trips

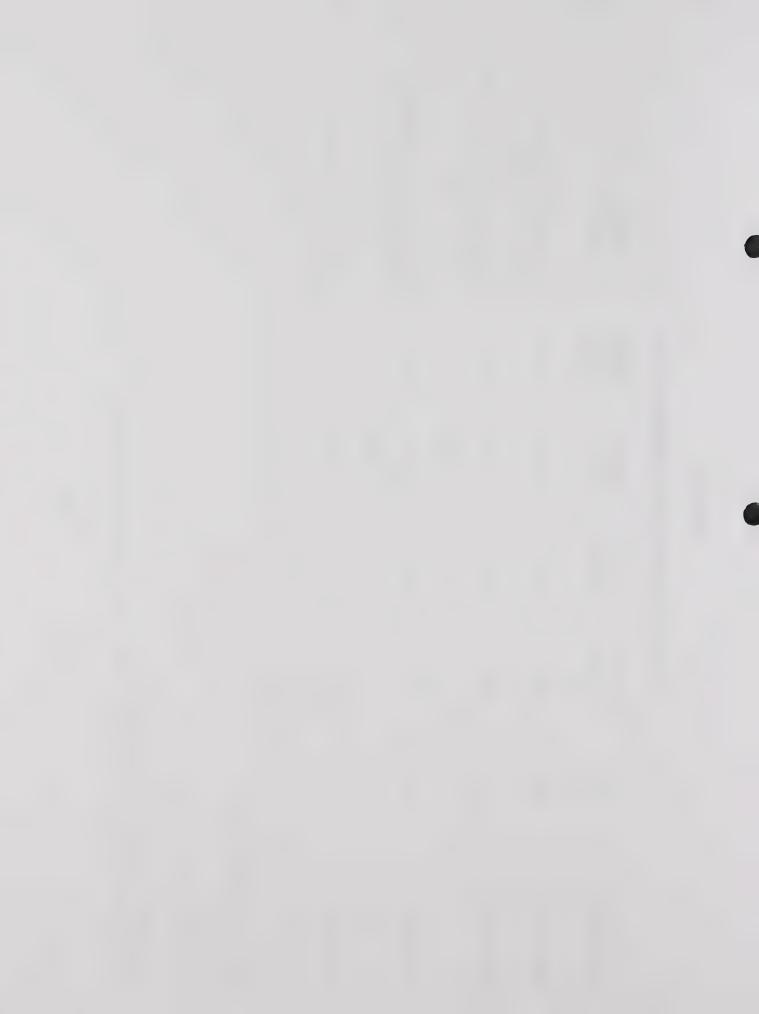
D = Divided

U = Undivided

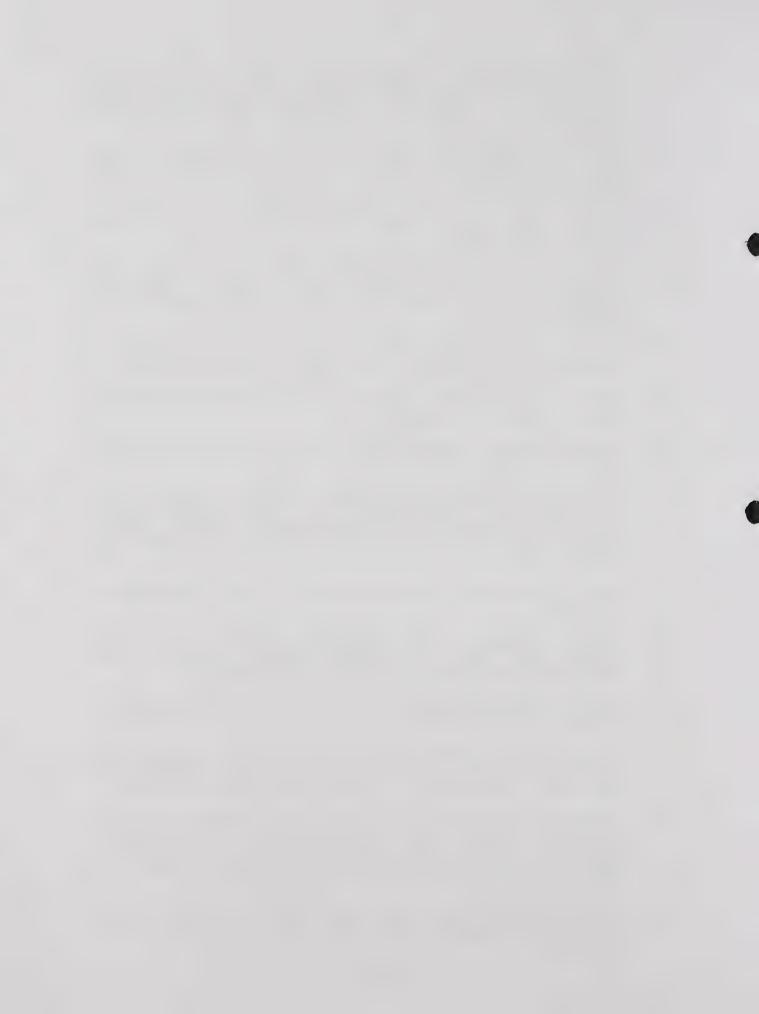
R/W = Right of Way

^{*} Also 80' R/W and 48' width as a one-way street

⁺ Minimum Standards; not all existing streets or "lanes" meet the current minimum standards



- 2. Accommodate present and future traffic in a manner consistent with the higher priority of the Coronado General Plan concept to preserve the community's residential character.
- 3. Achieve a systematic classification scheme for city streets based on function and compatibility with adjacent land uses.
- 4. Provide circulation patterns that are continuous and clear to the users.
- 5. Provide circulation service that is safe for pedestrian, bicycle and motor vehicle traffic, efficient for all users, and direct in accordance with movement desires.
- 6. Respect the integrity and stability of neighborhoods, school areas, hospitals, and other activity centers.
- 7. Minimize pedestrian/ bicycle/ motor vehicle conflict points within the system.
- 8. Provide adequate pedestrian, bicycle and motor vehicle access to all parcels.
- 9. Reduce the adverse environmental and safety impacts and ameliorate the unpleasant side effects of traffic circulation (bulk, noise, fumes, clutter, cross traffic barrier and the physical isolation of areas from each other).
- 10. Minimize through traffic movement on local residential streets.
- 11. Reduce excessive traffic speeds on residential streets through the use of traffic control measures and modifications to street design as appropriate.
- 12. provide residential streets with the clear appearance of their local function.
- 13. Achieve on the arterial system a level of service (LOS)
 "C" with a peak traffic hour LOS of "D" through the
 year 2010. (Appendix "B" defines and explains LOS).
- 14. Consider incorporation into the "City of Coronado CEQA Guidelines" local significance thresholds of what is not significant project traffic generation in regard to requiring additional CEQA analysis for the average daily trips generated by small projects.
- 15. Consider incorporation into the "City of Coronado CEQA Guidelines" standardized traffic related project mitigation.



The Circulation Plan

The Circulation Plan (Figures "A" and "B" on pages E5 and E6) continues to rely on existing state highways 75 and 282 to compose the principal arterials for the City. The Third Street/Fourth Street "couplet" (which includes portions of Pomona Avenue and Alameda Boulevard) provide primary access from the bridge to North Island Naval Air Station. Third Street is designated one-way traffic westbound and Fourth Street is designated one-way traffic eastbound.

Orange Avenue will remain the principle arterial for north/south traffic. State Highway 75 will continue to be the primary arterial through the City from the south; composed of the strand highway, Orange Avenue, Third and Fourth Streets east of Orange Avenue, Pomona Avenue (between Third and Fourth) and the bridge. Third and Fourth Streets west of Orange Avenue and Alameda Boulevard between Third and Fourth Streets will continue to compose State Highway 282, and (along with State Highway 75) will continue to be the primary route from the bridge to North Island Naval Air Station. Third and Fourth Streets (and Alameda Avenue and the Pomona Avenue spur between Third and Fourth Streets) will remain one-way as currently designed.

The Circulation Plan does not permit traffic to cross Fourth Street on Glorietta Boulevard or Pomona Avenue. Traffic proceeding between the Strand and the Naval Air Station will continue to be dispersed according to the available gate most convenient for each driver. Main gate traffic will still use Alameda Boulevard and Gate 2 vehicles can proceed via Orange Avenue and First Street.

The Circulation Plan assumes that the realignment of the westbound roadway of State Route 75 near Pomona Avenue will be eventually achieved per the Unified Transportation Plan. Similarly, the Circulation Plan assumes that certain of the more detailed traffic management proposals of the UTP (such as, new traffic lights and turning lanes, synchronization of traffic lights, et cetera) will also be implemented and that some will not be implemented (see Appendix "A").

The functional classification of streets is listed below and shown on Figures "A" and "B".

Principal Arterials -

Pomona Avenue/Third Street/ Alameda Boulevard/Fourth Street "Couplet" from the Bridge to NAS North Island Orange Avenue from Third Street to Avenida del Sol

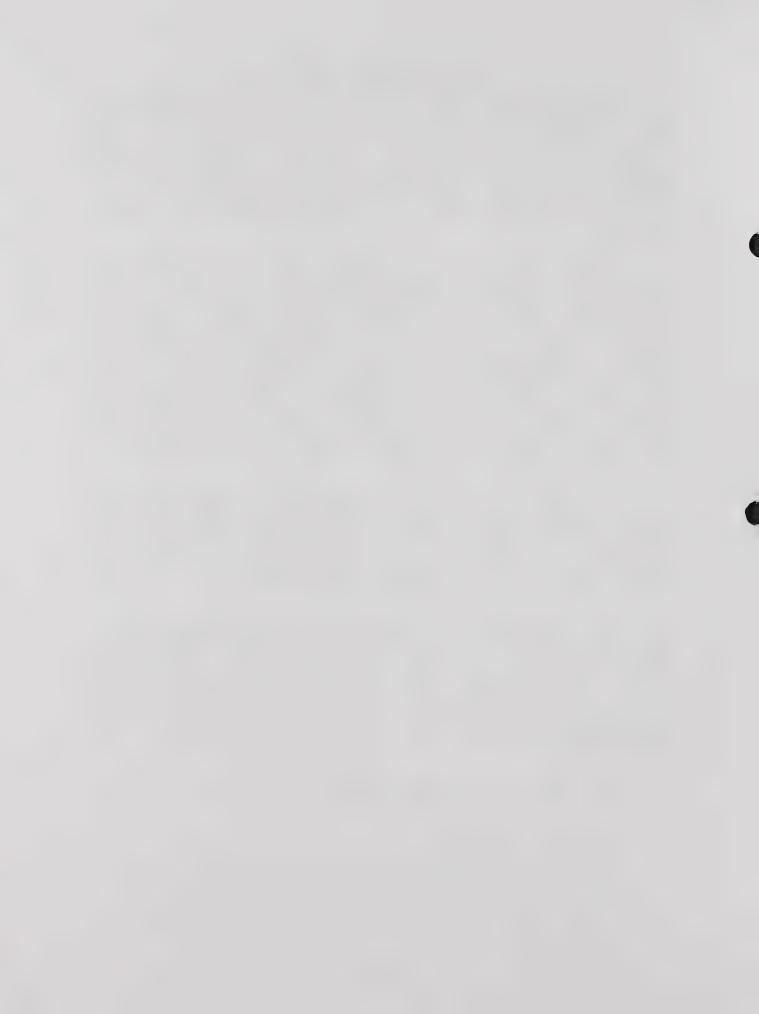
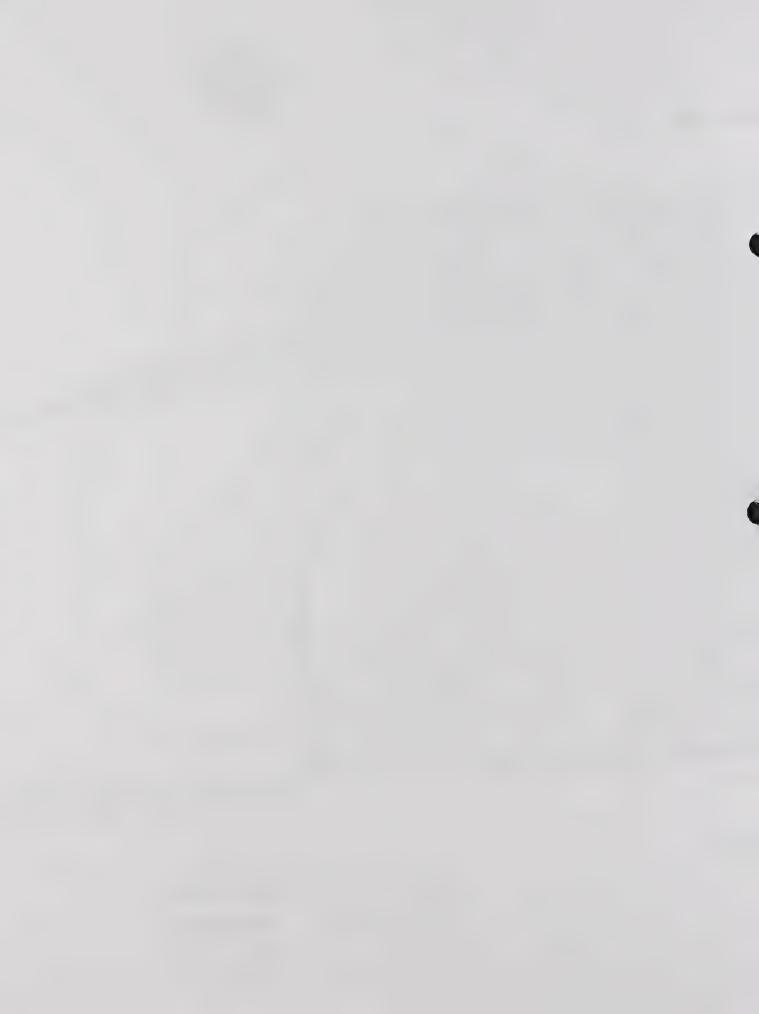


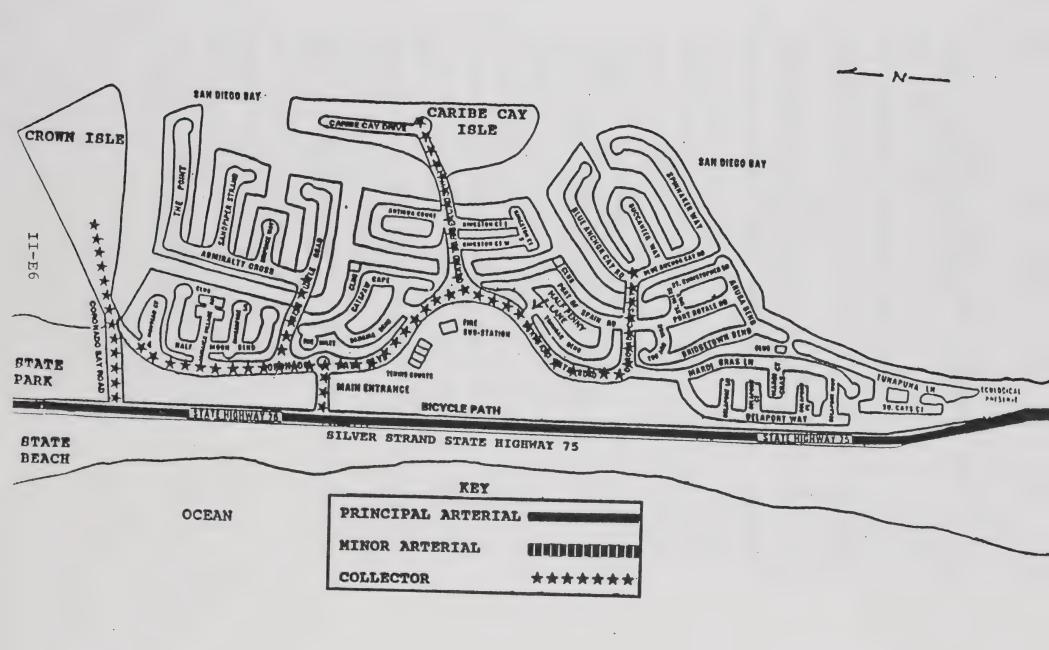
FIGURE A CIRCULATION PLAN (THE VILLAGE) SAN DIEGO BAY COLF COURSE GLORIETTA BAY STA BUS OCEAN KEY PRINCIPAL ARTERIAL MINOR ARTERIAL amaan ***** COLLECTOR II-E5

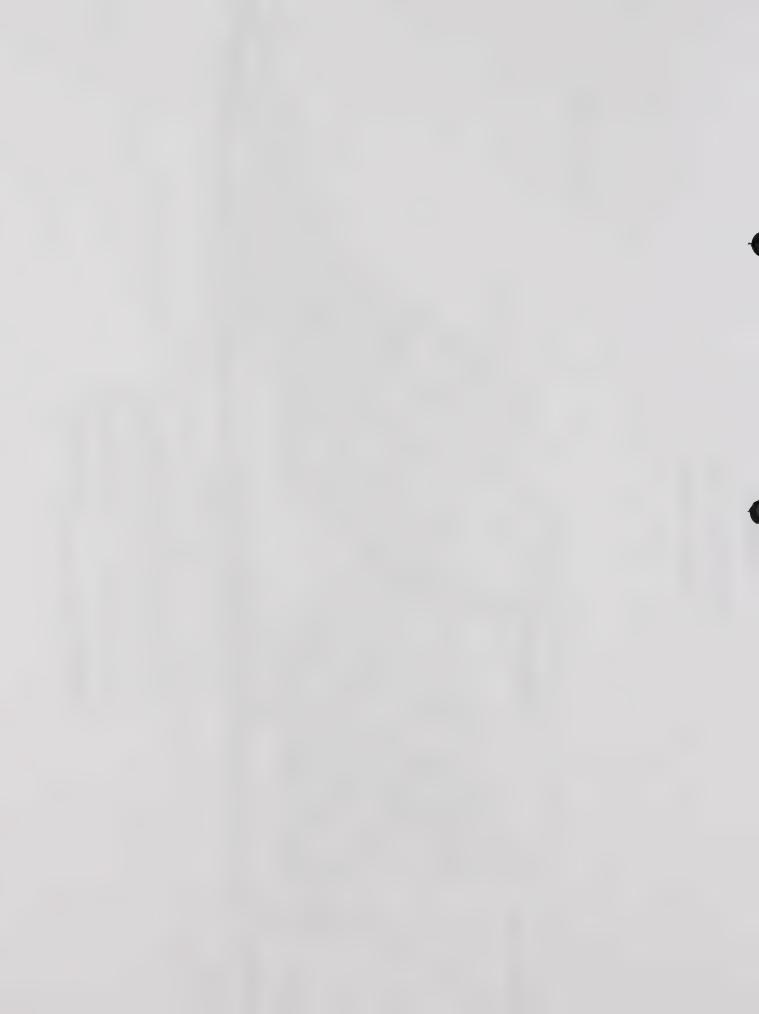


PIGURE 9

CIRCULATION PLAN

(SILVER STRAND)





Silver Strand Boulevard from Avenida del Sol to Imperial Beach city limits

Minor Arterials -

Orange Avenue from First Street to Third Street

Ocean Boulevard - Dana Place from NAS Gate 5 to Orange Avenue

Pomona Avenue (and a short segment of Glorietta Boulevard) from Fourth Street to Orange Avenue

Alameda Boulevard from First Street to Ocean Boulevard

- Collector Streets -

First Street from A Avenue to Alameda Boulevard

Glorietta Boulevard from Fourth Street to Pomona Avenue

Glorietta Boulevard (as extended by new tidelands roadway) from bridge toll plaza to Second Street; Second Street from new tidelands roadway to A Avenue; A Avenue from Second Street to First Street

B Avenue from Orange Avenue to First Street

D Avenue from Tenth Street to First Street

H Avenue from Tenth Street to First Street

Sixth Street from Alameda Boulevard to Glorietta Boulevard

Tenth Street from Alameda Boulevard to Pomona Avenue

Coronado Cays Boulevard

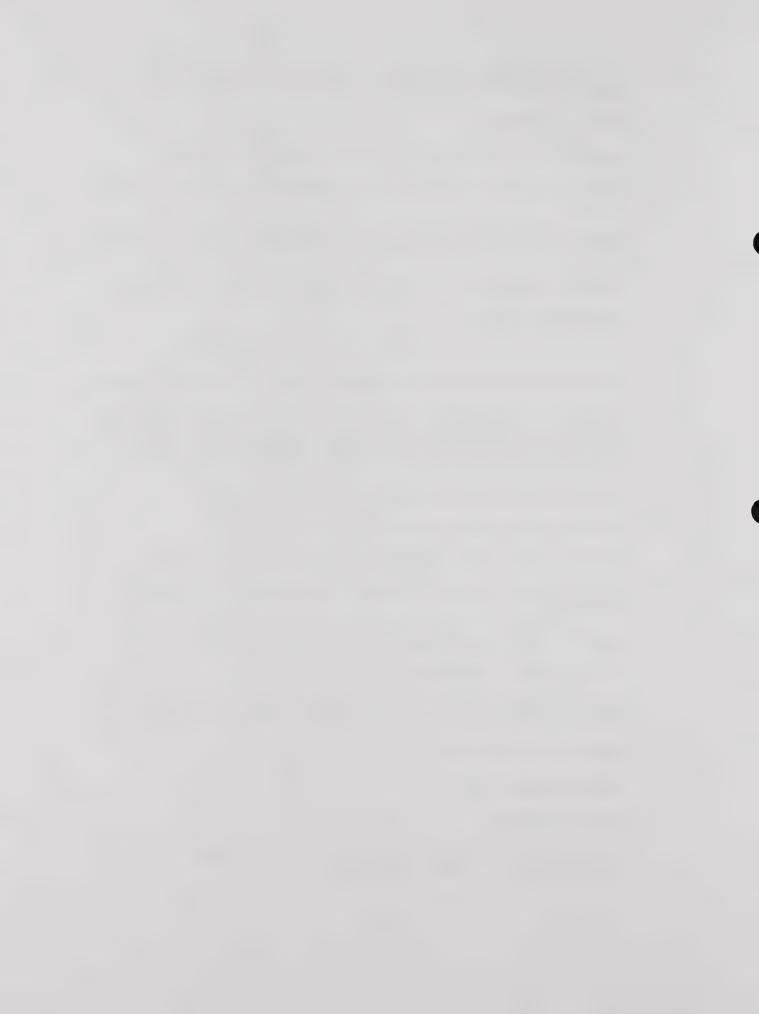
Green Turtle Road from Coronado Cays Boulevard to Admiralty Cross

Grand Caribe Causeway

Coronado Bay Road

- Local Streets -

All streets not classified as arterial, minor arterial or collector are local streets.



Bus, Bicycle and Pedestrian Circulation

Figures "C" and "D" respectively depict the existing Metropolitan Transit Development Board (MTDB) bus routes 901, 902, and 903 and the City's 904 shuttle bus route. Routes 902 and 903 are rush hour augmentations for Route 901. San Diego Transit Route 19, which provides direct commuter service to North island Naval Air Station from various parts of central San Diego, traverses the same route in Coronado as MTDB bus route 903. The routes shown on Figures "C" and "D" are subject to negotiation between the City and the operating entities, and are not established or mandated by depiction in these Figures.

The MTDB 901 bus route carries a rack capable of transporting a maximum of five bicycles. Therefore, this bus route allows cyclists to traverse the bay via the Coronado-San Diego Bay Bridge. The pedestrian-bicycle ferry (addressed on Page II-E12) similarly permits such cyclist crossings of the Bay.

Tentatively scheduled for January 1996, all buses utilized on Routes 901, 902, 903, and 904 will be equiped with new front-mounted bicyle racks capable of carrying two bicycles per bus. The existing rear-mounted racks on Route 901 will be discounted at that time.

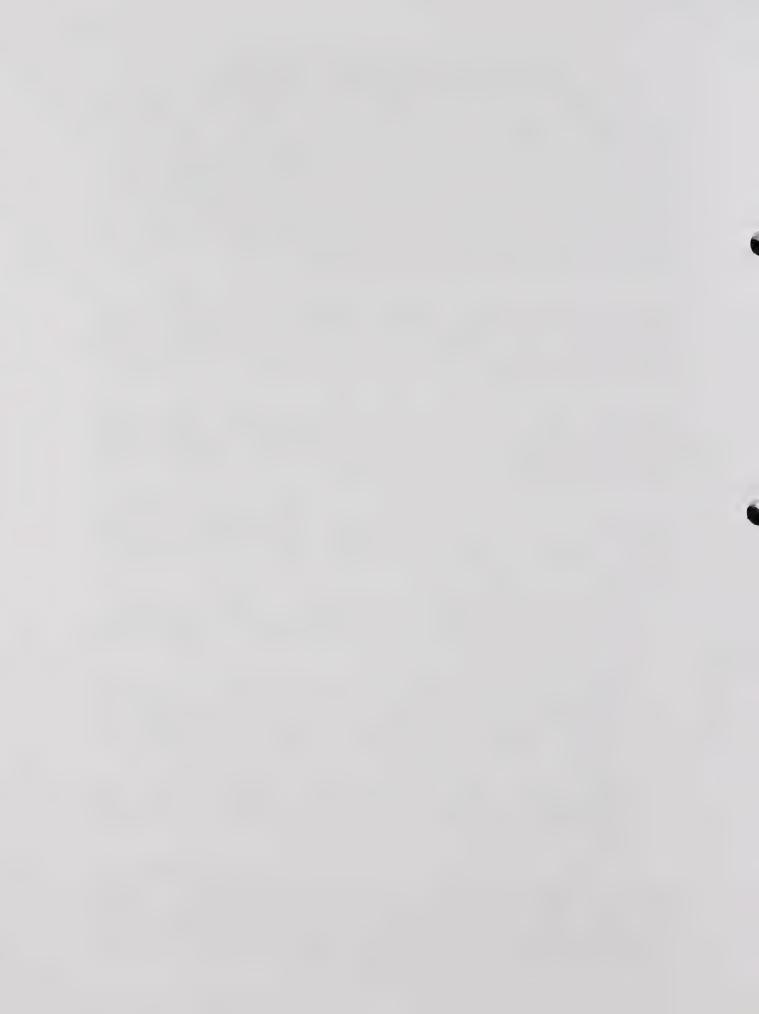
Figure "E" presents the City's "Bicycle and Pedestrian Routes". "...Three classifications of bikeways have been widely adopted on the basis of standards developed in Germany and subsequently modified by the California Department of Transportation.

<u>Class I - Bike Paths</u>: A completely separate right-of-way designed for the exclusive use of bicycles. They are found primarily in recreation areas, rural areas and new developments.

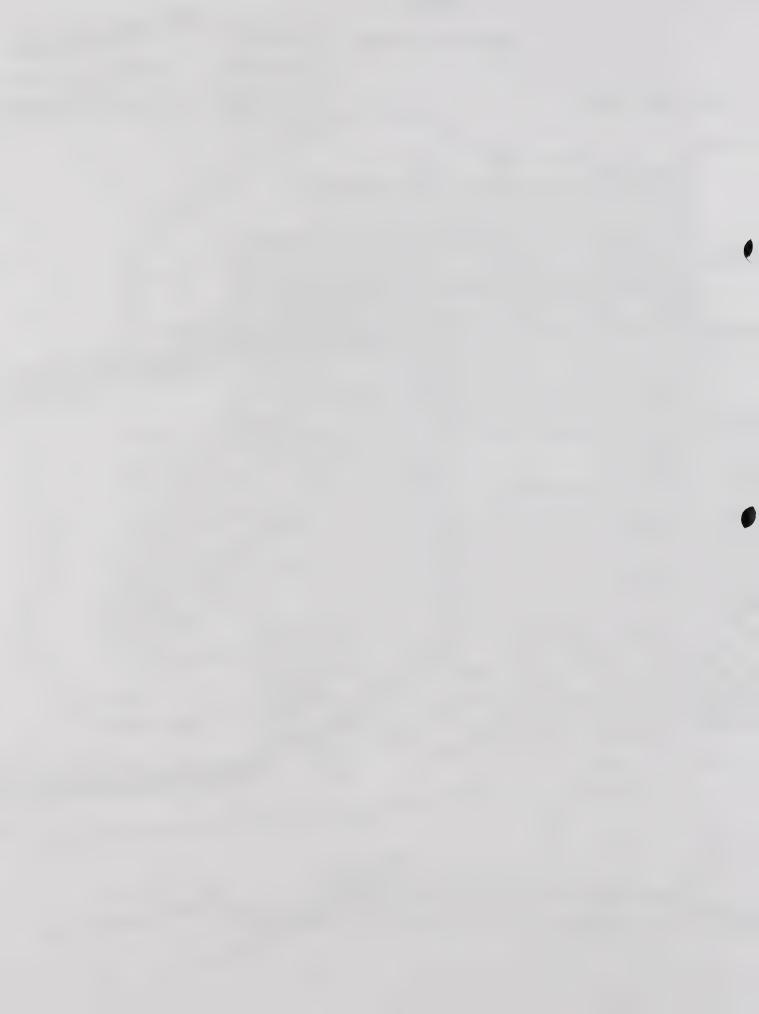
Class II - Bike Lanes: A restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles. They are usually provided on an existing roadway, permitting cross traffic or parking but separated from through traffic by a curb or barrier.

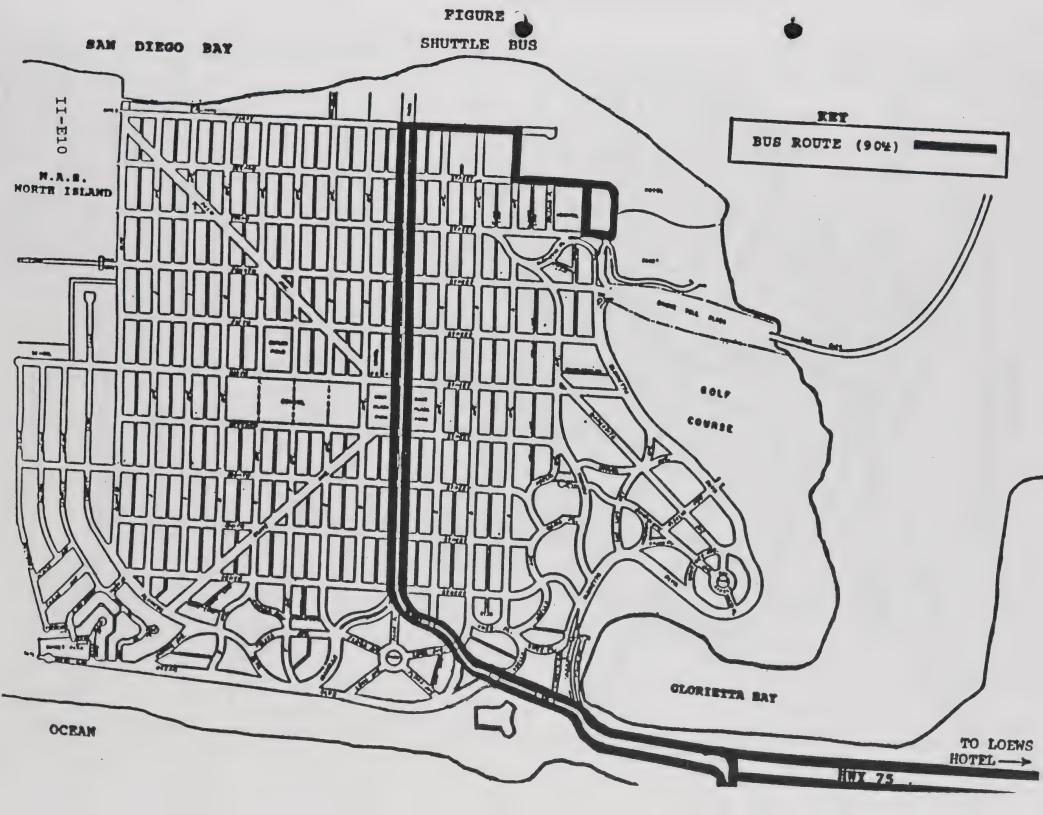
<u>Class III - Bike Routes:</u> A shared right-of-way designated by signs or pavement markings. They are provided on an existing roadway, permitting use by all types of vehicles."*

^{*} SOURCE: Schultz, Marilyn et al, <u>Encyclopedia of Community Planning and Environmental Management</u>. 1984. Page 36. <u>Note that California</u> statutes specify that a bike lane provides a <u>striped lane</u> for one-way bike travel on a street or highway. Coronado's one bike lane is denoted by a striped lane, not by curbs or barriers.









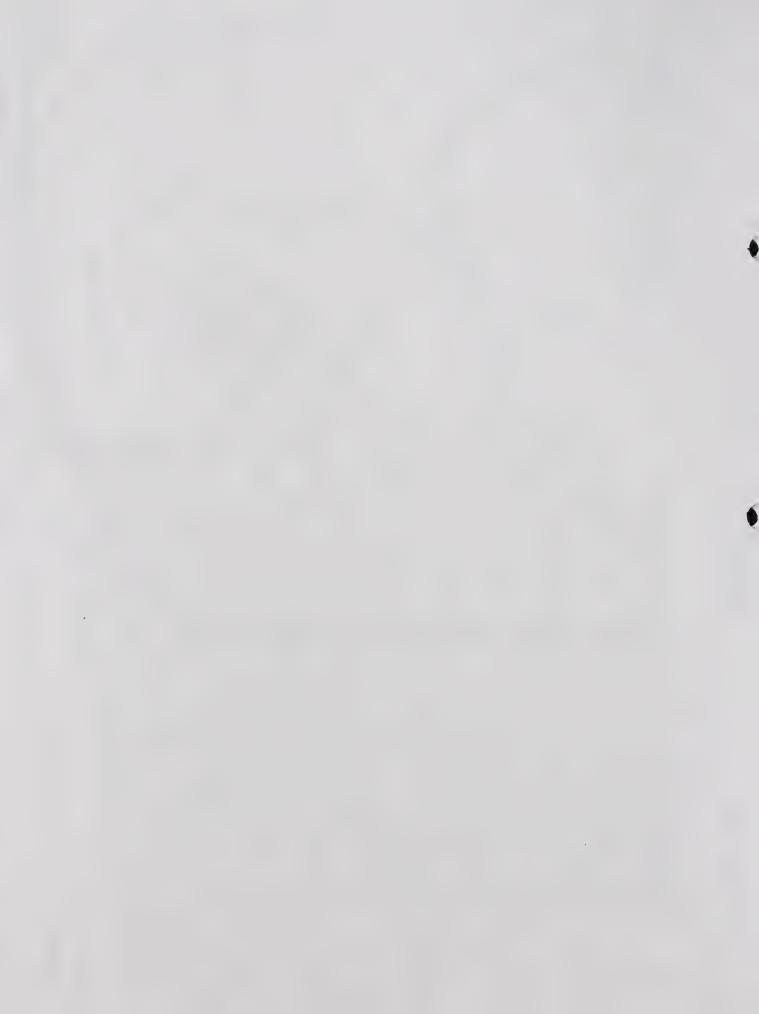
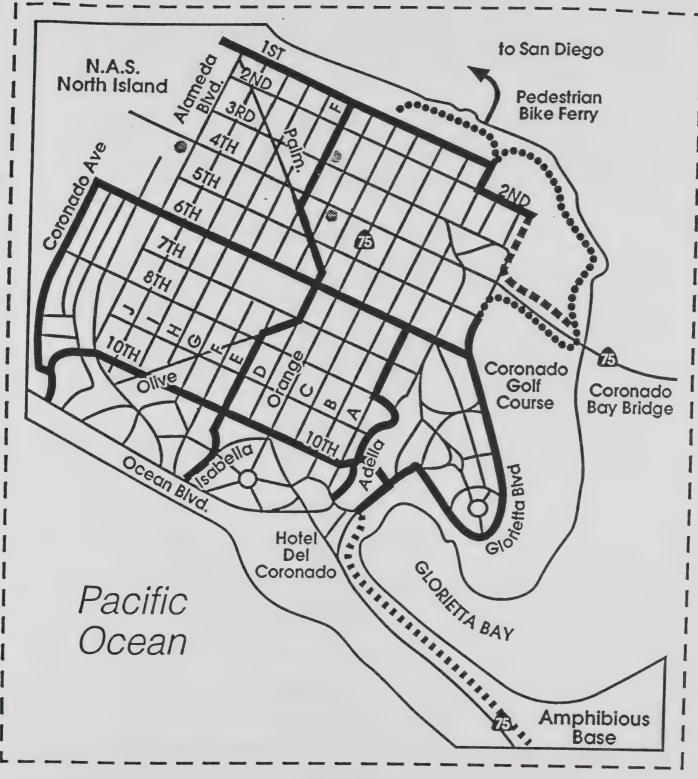
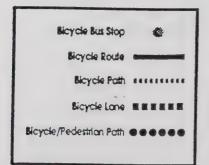
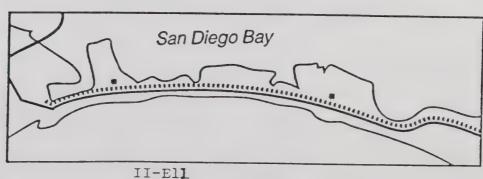
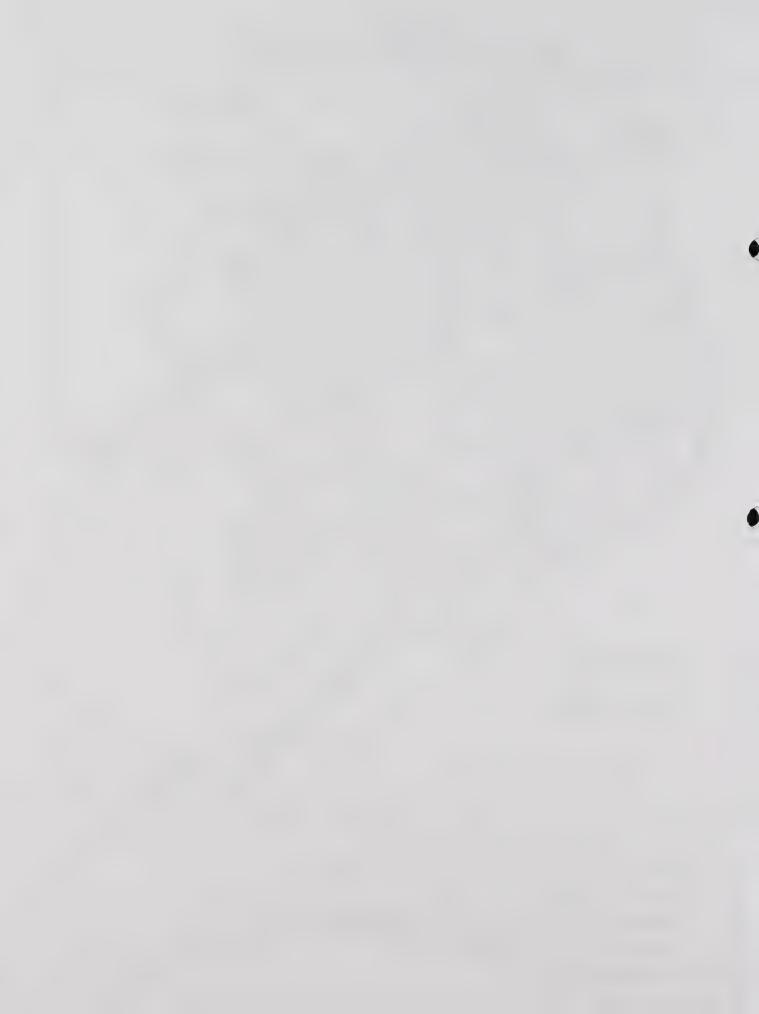


Figure E Bicycle and Pedestrian Route









At present, the City has a bike lane in Tidelands Park that extends along Glorietta Boulevard to Second Street, and has one bike path down the Silver Strand and another around the bridge toll plaza. Figure "E" depicts the City's bike lane, bike paths and bike routes.

Figure "E" also denotes those pedestrian routes that are also available for bike use along the City's shoreline. In addition, some type of facility to facilitate pedestrian crossing of Fourth Street is proposed for somewhere east of Orange Avenue to link the Golf Course area with Tidelands Park.

Water Vessel Circulation

Existing and proposed pedestrian/bicycle ferry "Water Routes" are depicted on Figure "F". The ferry presently traverses the bay from just North of the Broadway Street pier in the City of San Diego to the end of "B" Avenue in Coronado. A commuter ferry service also traverses the bay on a triangular route from Broadway to the vicinity of pier JK at NAS North Island and "B" Avenue in Coronado. In addition, there is a proposed commuter ferry route from the Naval Training Center, San Diego, to NAS North Island.

Existing and proposed facilities that would permit water taxi use on the bay are noted on Figure "F". The sites suitable for water taxi usage illustrated on Figure "F" are:

Existing

North Island Naval Air Station Coronado Yacht Club Glorietta Bay Marina Coronado Municipal Harbor Master Dock Coronado Cays Yacht Club Old Ferry Landing Commercial Complex Le Meridien Loew's Coronado Bay Resort

Proposed

Silver Strand State Park Marina

Hazardous materials are not permitted on the bridge. The transportation of explosives and any other highly hazardous materials is to be by barge whenever possible. Figure "F" also depicts the ordinance loading pier on North Island Naval Air Station.

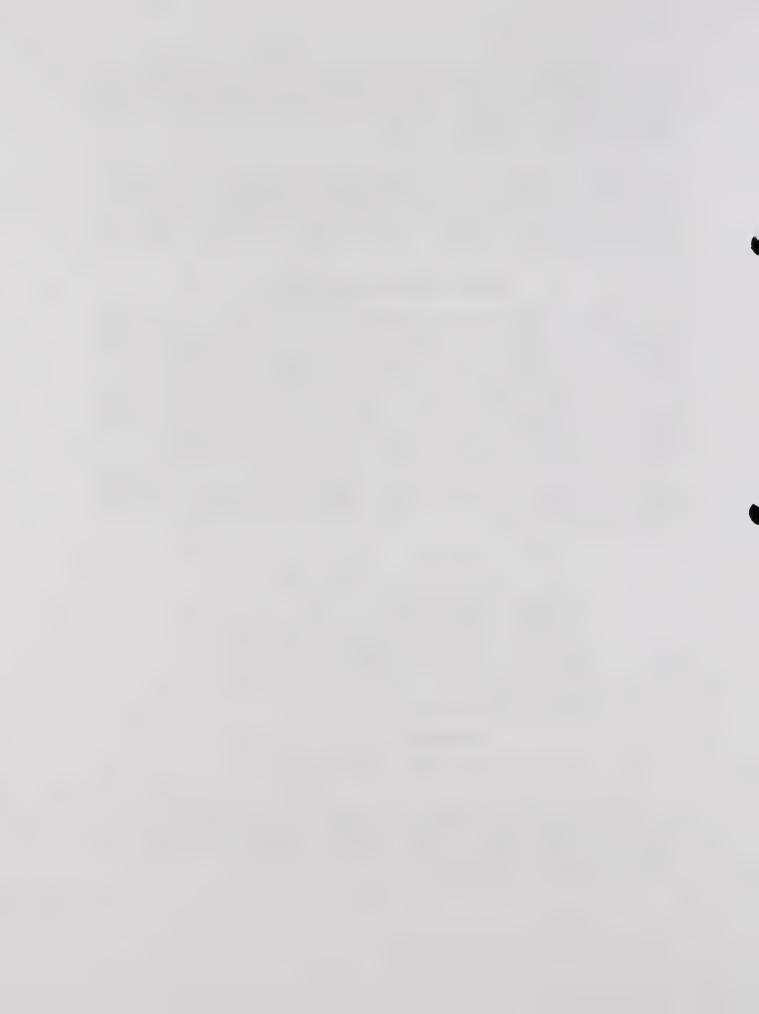
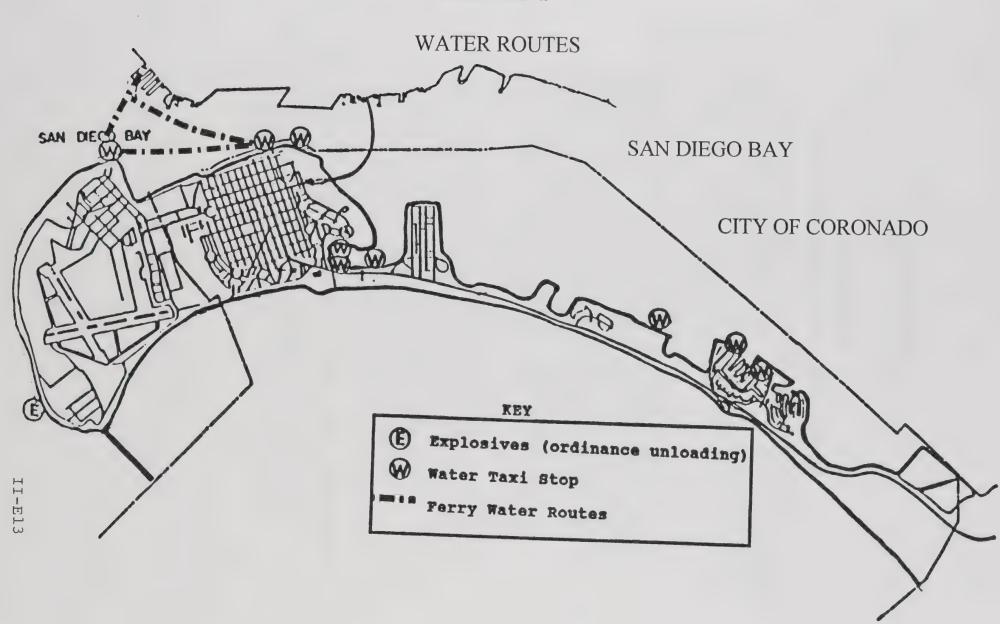
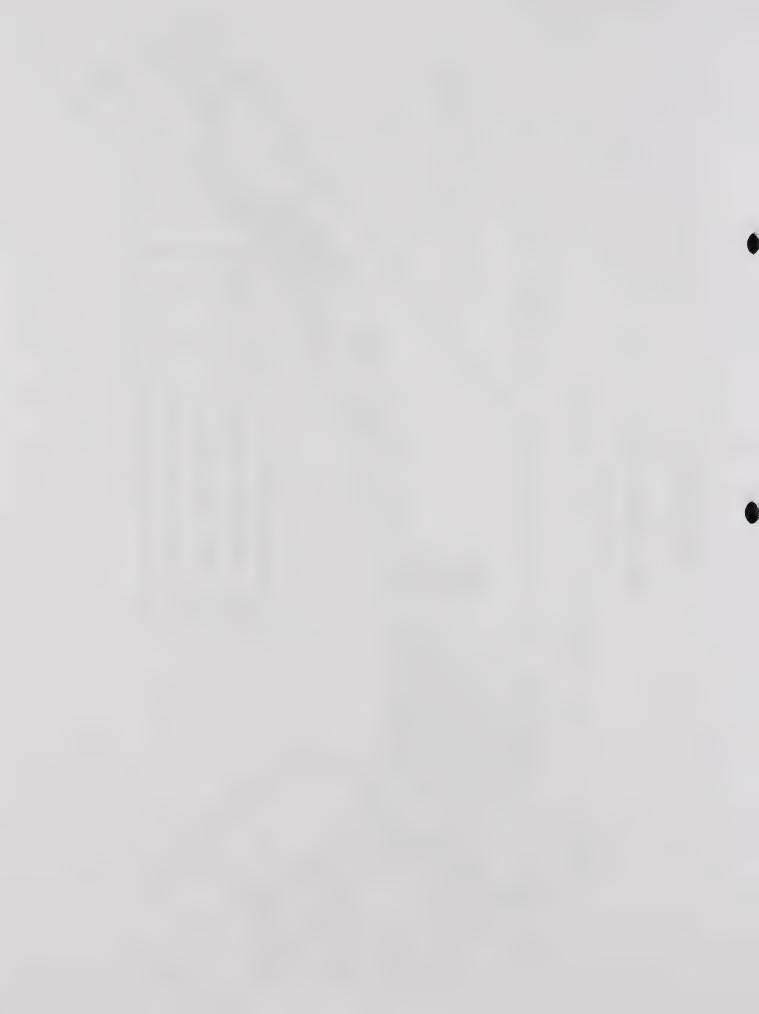


FIGURE F





APPENDIXES

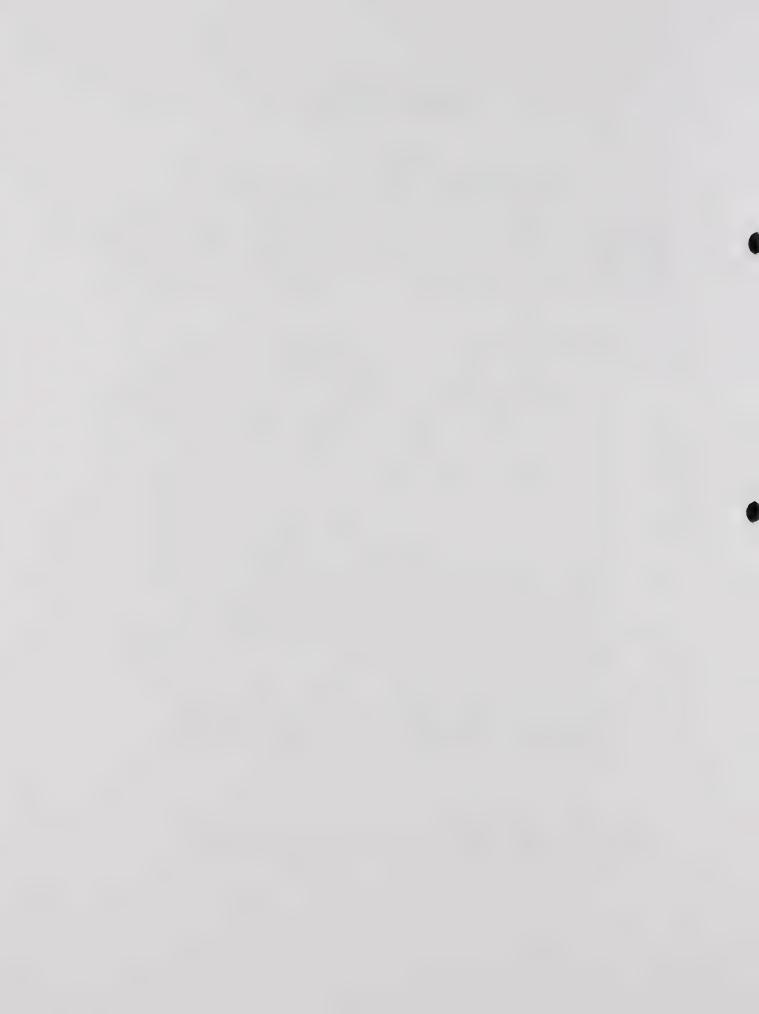
Appendix A

Unified Transportation Plan Projects

The UTP projects will be reviewed and implemented or rejected as deemed appropriate by the City Council during the time frame of this Circulation Element.* The status of the proposed UTP projects were last addressed as a whole by the City Council in June 1993. The status of these projects as of October 1995 is as follows:

- AS-1. Third Street Gate Entrance for NASNI: Project dropped by Navy (but still supported by City).
- AS-2. Traffic signals at Third and Alameda, and at Fourth and Alameda: While the Third Street light has not yet been addressed by City Council, the City Council determined on January 19, 1993 to support a signal light at Fourth Street and Alameda Boulevard even if the Third Street light is not implemented.
- AS-3. NASNI Gate 5 (Ocean Blvd.): Not yet addressed by City Council. Needs further work, expansion and discussion. Not supported by City in its present
- AS-4. Double left turn lanes northbound Orange to R.H. Dana: Approved. No action is anticipated on this project so long as the present left turn lane has adequate capacity for the vehicles serviced by it.
- AS-5. Double left turn lanes, southbound Orange to eastbound Fourth: Rejected by City Council as proposed; tabled for further discussion.
- AS-6. Traffic signals at Third and "B": Not yet addressed by City Council.
- AS-7. Traffic signals at Fourth and "B": Not yet addressed by City Council.
- AS-8. Pedestrian overcrossing, Fourth and Glorietta:
 Dropped by City Council in its proposed form;
 alternative locations east of Orange Avenue and concepts will be considered.

^{*} NOTE: The map on page 6 of the UTP does <u>not</u> represent the circulation plan adopted by the City.



- AS-9. Traffic signals at Third and "H", and at Fourth and "H": Not yet addressed by City Council.
- AS-10. SR75, Del Sol, Pomona intersection: This is an approved CALTRANS project.
- AS-11. Traffic signals at Sixth and Orange: Approved.
- AS-12. Traffic signals at Ninth and Orange: Concept rejected by City Council.
- AS-13. Truck Route System: Approved.
- AS-14. Emergency signs to warn motorists of bridge closures: Approved for Main Gate NASNI; approved for Main Gate at NAB; rejected by City Council for Fourth and Orange, and for Silver Strand.
- AS-15. Emergency traffic map for NAB and NASNI on-station commuters: Bases have plans, but unknown whether anything is published yet.
- AS-16. Realignment of SR75 at Fourth near Pomona: Approved.
- M-1. Sound barrier wall concept on Third and Fourth public right of way rejected by the residents and therefore has been dropped by the City Council. Private property mitigation and public property landscaping has been requested. Undergrounding of utilities has been completed.

Appendix B

Level of Service For Signalized Intersections*

Level of service (LOS) for signalized intersections is defined in terms of delay. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Specifically, level-of-service criteria are stated in terms of the average stopped delay per vehicle. The criteria are given in the following Table "B".

^{*} SOURCE: The 1985 CALTRANS Highway Capacity Manual.

TABLE B

Level of Service For Signalized Intersections*

| LEVEL OF SERVICE | STOPPED DELAY PER VEHICLE (SEC) |
|------------------|---|
| A B C D E | \leq 5.0 5.1 to 15.0 15.1 to 25.0 25.1 to 40.0 40.1 to 60.0 |
| F | > 60.0 |

Level-of-service A describes operations with very low delay, i.e., less than 5.0 sec per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.

Level-of-service B describes operations with delay in the range of 5.1 to 15.0 sec per vehicle. This generally occurs with good progression and/or short cycle lengths.

Level-of-service C describes operations with delay in the range of 15.1 to 25.0 sec per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level-of-service D describes operations with delay in the range of 25.1 to 40.0 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level-of-service E describes operations with delay in the range of 40.1 to 60.0 sec per vehicle. This is considered to be the limit of acceptable delay. Individual cycle failures are frequent occurrences.

Level-of-service F describes operations with delay in excess of 60.0 sec per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection.

^{*} SOURCE: The 1985 CALTRANS Highway Capacity Manual.

